

Discourse Phenomena and Linguistic Theory

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O. Introduction

Language, when viewed as a system of communication between people, is used for many purposes. We all use language every day to inform, make requests, ask questions, give direction or instruction, and for much else. Much research has been conducted into the specific syntactic correlates of the speech acts that speakers perform (see Sadock 1974 for a good summary and theoretical views on speech acts). This is an exciting field of study, and it has greatly expanded the domain of linguistic research. But while many syntactic processes and constructions have been shown to correlate with so-called speech act types, e.g., request, promise, suggestion, the speech act of informing or stating has received less attention, probably because most sentences uttered by speakers are informative statements. Straightforward stating of information is the unmarked mode of communication. I define an informative statement as one that expresses a proposition in the logical sense with the illocutionary force of a statement, for which, according to Searle (1969), the speaker has evidence (reasons, etc.) for the truth of his statement, the speaker believes his statement, and it is not obvious to both the speaker and hearer that the hearer knows the proposition expressed by the statement.

But beyond the fact that it is performed more often, the act of informing is of special interest from another point of view. This is that an act of informing may take place over a number of sentences. While a speaker or writer performs an act of informing or stating with each felicitously uttered or written informative statement, he typically does not perform such an act "out of the blue." For example, a speaker may perform an act of informing in response to a question. Or, a speaker or writer may perform a series of acts of informing. In answering a question, a speaker who is behaving rationally may not by his answer express any random proposition, but rather one that provides the information requested by his interlocutor. Similarly, a speaker who performs a sequential series of acts of informing does not in general express random propositions. The sentences produced are related to one another.

The aim of this thesis, then, is to investigate some of the syntactic correlates of the relationships that hold between sentences, and to suggest how linguistic theory might account for those correlates. In Section 1, I briefly discuss some of the historical antecedents leading to this study, primarily the Prague School view of syntactic theory. I present in Section 2 a review of Kuno's (1972) article "Functional Sentence Perspective", which serves as the Ausgangspunkt

for this study. Section 3 contains my definition of discourse, the domain of this study. In Section 4, I present a number of examples of sentences in context, and I argue that their structures may be accounted for by proposing that sentence elements in a discourse possess a property that I call topicality, a high degree of which property, I claim, is the factor that determines whether certain pronominalization processes may take place. A discussion of how a sentence element may gain topicality is also included. Section 5 contains a summary of my claims and a prospectus for future investigation into sentences in context.

Finally here, I want to make an important point about the data used in this investigation. From the standpoint of syntax, almost all sentences that are examined are grammatical in isolation. When they are put into the context of other sentences, we will be dealing with a different kind of 'grammaticality' that might best be termed discourse appropriateness. Thus, asterisks and question marks are used herein to designate inappropriate discourses, or sentences that are inappropriate within a specific discourse environment. Unless specifically noted, all marks of grammaticality judgments are to be interpreted in this way.

1. Sentences and Context

The sentence has been the object of study in transformational generative grammar since Chomsky 1957. Until recently, most generative grammarians have been concerned with the syntactic processes which take place under an analysis of the node S. And, indeed, a great many syntactic processes or transformations have been discovered since 1957.

While English was the object of study of most of the early research using transformational theory, linguists of the Prague School (headed by Vilém Mathesius) investigated the syntactic properties of Slavic languages. These languages, which have a good deal of case marking, were found to have more freedom of word order than languages like English. It was noted, however, that within discourses the order of elements in a sentence appeared to be constrained. Thus scholars theorized that the normal or unmarked word order of a sentence in the context of other sentences followed (in these languages) not an order based on the grammatical relations between the elements of the sentence, but rather an order whereby elements that are known precede elements that are new. According to the theory of functional sentence perspective, then, if a sequence of sentences is considered as the communication of information, then the normal word order of a sentence is old information first, then new information, where old information means those elements mentioned in preceding sentences.

In comparing translations of Czech and English literature, it was found that certain correlations obtained, e.g., that an English passive sentence was often translated by a Czech OSV sentence and that a Czech OSV sentence was often translated by an English passive. Remembering that in Czech an initial word will be old information, Mathesius was led to the conclusion that English, too, had a basic word order based on information distribution. However, for an English

sentence to achieve a normal information distribution, changes in grammatical relations as well as word order must take place, due to the grammatical principles of English. Firbas (1964, 1966, 1971) has written at length on the interaction of this basic distribution of information and the syntactic constraints on word order in English. The approach Firbas has taken has been basically a descriptive one.

Given these observations, and given the fact that in the use of language, sentences are typically uttered or written in the context of other sentences, a proper question to be asked is: can sentence constructions or transformations in English be contextually conditioned? The answer to this question is, I believe, indisputably affirmative. To prove this, one need only select at random sentences from a book, a speech, or a transcribed conversation, then apply at random any subset of the applicable optional transformations to the deep structure of one sentence and read the resultant sentence in the context of the unchanged surrounding sentences. The result, much more often than not, will be not an ungrammatical sentence (as transformations do not produce ungrammatical sentences), but a felt inappropriateness of the sequence. Assuming that transformations maintain the propositional content of the original semantic structure, i.e., they do not change meaning, some other factor or factors must account for the oddness of certain sequences of sentences.

Kuno (1972), adopting some of Firbas' notions and adding some of his own, investigates some of these contextual factors. In this thesis, I will first review some of Kuno's observations. I will then expand the range of data Kuno investigates and propose what I believe to be a proper approach for the study of the contextual conditioning factors of and constraints on certain syntactic constructions and transformations.

2. Kuno's Position and Criticisms

2.1. Kuno's Functional Sentence Perspective

Kuno (1972:297) argues that:

...given appropriate contexts, that sentences such as

(6-1) Alexander kissed Mary.

can represent any of the following four meanings

- (6-2) a. [theme]: 'Speaking of Alexander, he kissed Mary'
- b. [contrast]: 'As for Alexander, he kissed Mary' as in Alexander kissed Mary, but Bill didn't.
- c. [exhaustive listing]: 'It was Alexander who kissed Mary' as in Who kissed Mary? (Only) Alexander kissed Mary.
- d. [neutral description]: 'It happened that Alexander kissed Mary' as in What happened next? Alexander kissed Mary.

Sentences of neutral description, according to Kuno, contain only new information. 'New information' does not refer only to words or phrases mentioned for the first time. Lexical items may be anaphoric (previously mentioned) and yet convey new information if '...the semantic relations of the [sentence element] with respect to the rest of the sentence is new.' (272, fn. 5). Neutral description sentences typically follow expressions like Oh look!, What happened next?, as in (1) and (2):

- (1) What happened then? Alexander kissed Mary. (K6-4b)¹
- (2) Oh, look! Alexander is running. (K6-5b)

Thematic sentences, on the other hand, contain old, predictable information. Thus, sentences identical to the second sentences in (1) and (2) may have a thematic interpretation in a context in which an element is predictable, as in (3) and (4):

- (3) What did Alexander do? Alexander kissed Mary. (K6-4a)
- (4) What is Alexander doing? Alexander is running. (K6-5a)

The importance of the distinction between theme and neutral description is that, according to Kuno, certain sentence constructions may have only one or the other interpretation. For example, a thematic sentence the subject of which is the theme of the sentence, or 'what the sentence is about', allows left dislocation of the subject, e.g. (5):

- (5) a. John is a genius.
- b. John, he's a genius. (K6-7)

However, in neutral description contexts, such dislocation is not allowed, e.g., (6):

- (6) a. Oh, look! John is running.
- b. Oh, look! *John, he is running. (K6-9)

Note that in this context, even though the identity of John is known--John may be anaphoric or "up" in the minds of the speakers--the relationship of John to the sentence and to the preceding sentence is new.

Certain other constructions, according to Kuno, will not allow a thematic interpretation of their subjects, for example:

- (7) a. {There was John} still standing in front of the door.
There he was
- b. *John, {there was him} still standing in front of
the door. (K6-10)

Sentences like those of (8) also cannot have a subject thematic interpretation:

- (8) a. Round the bend came the train.
 b. Up jumped the rabbit.
 c. Standing there was my brother. (K6-12)

These sentences are claimed to present a whole event or state as new by talking about the coming into existence of something. These sentences will be discussed in section 4.2.1. below.

The notion of theme, or 'what a sentence is about', is central to the rest of Kuno's observations. Kuno presents two hypotheses having to do with the notion of theme and old information, the first of which is

- (9) Hypothesis II. Backward pronominalization is possible in English only when the rightmost of two coreferential noun phrases represents old predictable information. (302)

In support of this hypothesis, Kuno gives a set of conversational sequences (10) and (11):

- (10) Speaker A: Tell me about John.
 Speaker B: Although I dislike him, I am still seeing John. (K7-5)
- (11) Speaker A: Tell me about Mary.
 Speaker B: Although she dislikes John, she is still seeing him.
 *Although she dislikes him, she is still seeing John. (K7-6)²

where the second response in (11) is claimed to present new information, 'John', in a backward pronominalized sentence, hence in violation of Hypothesis II above.

As further proof of the validity of Hypothesis II, Kuno notes that indefinite noun phrases may not occur with postcedents:

- (12) a. Before I could talk to him_i, the policeman_i turned away from me.
 b. *Before I could talk to him_i, a policeman_i turned away from me. (K7-14)

where (12b) is ungrammatical because indefinite noun phrases always present new unpredictable information (304). Thus (12b) is also in violation of Hypothesis II.

Kuno also presents another hypothesis,

- (13) Hypothesis III. A noun phrase that represents the predictable theme of the sentence cannot be pronominalized intrasententially. (319)

Hypothesis III is a revision of a previous statement that the theme of a sentence cannot be pronominalized intrasententially. Kuno thus divides thematic sentences into those having unpredictable themes and those having predictable themes:

We have a predictable theme if in a given context one can predict what the next sentence is going to be about. (308)

Thus, Kuno says that in response to (14a), the NPs 'John' of (14b) are predictable themes, and hence the first occurrence of 'John' in (14b) is properly pronominalized. (14c), by Hypothesis III, is inappropriate, since the theme 'John' is in this context predictable.

- (14) a. Will John do it?
 b. If he can John will do it.
 c. *If John can, he will do it.

Hypotheses II and III taken together require backward pronominalization of predictable themes.

I will present some other relevant data given by Kuno, because I find disagreement on Kuno's judgments about these sentences. This disagreement, I believe, is due in part to the fact that many of the constructions Kuno is working with are infrequently used and tend to be markers of a rather formal style. Infrequency of such constructions alone would be expected to produce mixed judgments, but some explanation of the data must be given for those speakers who accept Kuno's judgments. Here then are some other examples of Hypotheses II and III at work:

- (15) What did John do for Mary?
 a. When he went to Boston, John took her out to dinner.
 b. *When John went to Boston, he took her out to dinner. (K7-18)

(15b) is judged in violation of Hypothesis III, since a predictable theme, 'John', has been pronominalized intrasententially.

- (16) Who did what for Mary?
 a. *When he went to Boston, John took her out to dinner.
 b. When John went to Boston, he took her out to dinner. (K7-19)

(16a) is in violation of Hypothesis II, because 'John' is new unpredictable information.

Finally, (17) and (18) are intended to point up the distinction between predictable and unpredictable theme:

- (17) Mary is a good friend of mine.
 a. Whenever I want to talk to her, Mary [predictable theme] comes to see me.³
 b. *Whenever I want to talk to Mary, she [predictable theme] comes to see me. (K8-7)

(18) Tom is a rather cold person. He avoids me when I need him.

- a. ?On the other hand, whenever I want to talk to her, Mary [unpredictable theme] comes to see me willingly.
- b. On the other hand, whenever I want to talk to Mary, she [unpredictable theme] comes to see me willingly. (K8-8)

(17b) is in violation of Hypothesis III, since predictable information is pronominalized intrasententially. (18a), given only a '?' by Kuno, should be a violation of Hypothesis II, since unpredictable themes are taken by Kuno to carry new information.⁴ Kuno gives no explanation of why (18a) receives only a '?' and not a '#' in section 4.1.2. I will provide an explanation for why (18a) seems to most if not all speakers to be an appropriate sentence.

Finally, Kuno comments that:

Predictable themes appear in discourses when the same topic continues, and unpredictable themes appear when new topics are introduced. (308)

with no further comment on the term topic. I will have much to say concerning this term in section 4.2.1.

2.2. Comments on Kuno

2.2.1. One of the difficulties in sorting out Kuno's distinctions is that he does not say anything about the relationship between neutral description sentences and thematic sentences containing unpredictable themes. Looking again at (16), repeated here as (19):

(19) Who did what for Mary?

- a. *When he went to Boston, John took her out to dinner.
- b. When John went to Boston, he took her out to dinner.

perhaps we could say that the response to (19) would require a theme, i.e., it is expected that the response to question (19) would be about someone. Consequently, although a thematic response is expected, just what element will be thematic is new information. Hence we might want to speak of a 'predictable unpredictable' theme. Similarly, in (18) above, after two sentences the themes of which are 'Tom', we find the next sentence begins with 'on the other hand'. This, it could perhaps be argued, is semantically an introducer of contrast, and hence the sentence containing it will also be about someone.

It should further be noted that the sentences of (8), like (8c):

(8) c. Standing there was my brother.

which Kuno claims cannot have a thematic subject, do not seem to be strictly neutral description sentences. (8c) would not answer questions like

(20) What happened then?

Rather, it could perhaps answer

(21) Speaker A: What did you see in front of the museum?
Speaker B: Much to my surprise, standing there was my brother.⁵

Now we must ask whether there is a difference between the sequence in (21) and that in (16), i.e., why can't the phrase 'my brother' in (21) be treated as an unpredictable theme? Here, I can only see left dislocation as a possible test to decide thematic versus neutral description interpretation. Thus, while (22), corresponding to (16), allows left dislocation, (23), corresponding to (21), does not:

(22) Who did what for Mary?
John, when he went to Boston, he took her out to dinner.
(23) What did you see in front of the museum?
*My brother, standing there was him.

We still have to ask why the response to (21) can't be considered a thematic sentence with 'in front of the museum' as theme, e.g., we can perhaps get a left dislocation as in (23'):

(23') What did you see in front of the museum?
?In front of the museum, standing there was my brother.

Kuno's analysis leaves many questions open here.

Finally, notice that left dislocation does not give any clue as to whether or not the theme of a sentence is predictable or not, since in (22) 'John' is, by Kuno's characterization, new information. But of course a left dislocated element can be old predictable information as in (24):

(24) How do you feel about gin?
a. Gin, whenever it's offered, I'll always drink it.
b. Whenever it's offered, I'll always drink gin.

(24b) with backward pronominalization verifies the predictability of the theme 'gin' by Hypotheses II and III.

2.2.2. In the previous subsection, I have tried to account for the existence of unpredictable themes by giving specific reasons from which one can draw the expectation that a following sentence will be thematic. Another issue which Kuno does not deal with at all is that certain contexts seem to require thematic sentences with certain elements barred from certain positions. Consequently, (25) seems odd with new

information in subject position and the theme in the by-phrase:

- (25) Tell me about Mary.
 ???John was shot by her yesterday.

Kuno does make the comment that

- (26) There is a hierarchy among various syntactic constituents within a sentence with respect to the ease with which they can be the theme of the sentence. The matrix subject has the first priority. (319)

Statement (26) is needed to account for the differences in judgment about (27):

- (27) a. *He_i calmed me before Harry_i did something rash.
 b. ?I calmed him_i before Harry_i did something rash.

where 'Harry' is the theme of the matrix sentence in both cases. The data of (25), however, indicate that there may be intersentential hierarchies involved also. We certainly want to ask why a theme cannot appear in a by-phrase of the passive, as in (25). This will be discussed in section 4.2.2.

2.2.3. Finally, with the exception of (17) and (18) above, Kuno's data consist almost entirely of question-answer sequences. It must be asked whether and how Kuno's hypotheses will fare with other kinds of sequences, i.e., in other types of discourse.

3. Discourse

I have so far been discussing the concept of sentences in the context of other sentences. In this study, the linguistic context of a sentence will be termed its discourse context. I define a discourse as a finite ordered sequence of sentences which bear semantic and pragmatic relevance to one another, in at least a loose manner. Thus, a sentence may be discourse-initial, discourse-medial, or discourse-final. Sentences that follow a particular sentence constitute that sentence's following discourse context. All sentences that precede a particular sentence constitute the previous discourse context of that sentence.

As was mentioned at the end of the last section, Kuno's data consist largely of question-answer sequences. This kind of discourse might be termed conversational discourse, a discourse involving two or more speakers. Kuno's data constitute a subtype of conversational discourse that we might term question-answer discourse.

Another kind of discourse can be distinguished, which I call expository or informative discourse. This type of discourse is a monologue and may be written or spoken. In its written form, we might expect Kuno's data to appear more frequently, since, as was mentioned above, data of this type are found in more formal styles of language. It is this kind of discourse, in its written form, which I have chosen as the object of study in this thesis. Written, expository

discourse is quite useful from two standpoints for a study of this kind. First, we can expect the sentences in such a discourse to bear more than a loose semantic relevance to one another, since the author is clearly trying to communicate organized thoughts and ideas to us. Second, the use of written discourse texts as data allows us to study prose which is well thought out, free from the sometimes biased self-introspection of many linguists, and from the variability of the moment--wherein an informant one minute judges a sentence grammatical or appropriate, and the next minute isn't sure. We here accept the texts as appropriate, and work from them.

While Kuno has made some very interesting observations about the contextual conditioning of backward pronominalization, it is difficult to apply his notions to expository discourse. For example, while questions seem to set up some expectation of what information or kinds of information will appear in a felicitous answer, we can not assume that there is an implied question before each sentence in a descriptive discourse. Furthermore, I find that I don't have any competence to test the thematicity of a sentence in expository discourse by a potential left dislocation test, since this construction usually occurs in conversational discourse and seems quite odd in a descriptive discourse.

To be fair to Kuno, his examples (17) and (18) of section 2.1 are expository discourses. So perhaps his notions can be extended. In the remainder of this thesis, I will examine some written descriptive discourse examples with a critical eye toward Kuno's observations and conclusions.

4. Discourse Phenomena

4.1. Pronominalization and Topicality

4.1.1. Intrasentential Pronominalization

In this section, I want to discuss Kuno's hypotheses about intrasentential pronominalization with respect to expository discourse. I repeat here for convenience Kuno's Hypotheses II and III.

- (9) Hypothesis II. Backward pronominalization is possible for English only when the rightmost of the two coreferential noun phrases represents old, predictable information.
- (13) Hypothesis III. A noun phrase that represents the predictable theme of the sentence cannot be pronominalized intrasententially.

Kuno asserts that a noun phrase is a predictable theme '...if in a given context, one can predict what the next sentence is going to be about' (308), and further that predictable themes appear when topics are continued. I noted previously that in question-answer discourse, it was relatively easy to make predictions about the answer. This does not seem to be the case with descriptive discourse.

Before presenting some data, I will give my characterization of Kuno's undefined term topic. I take the term topic to be a property of discourse use. Thus I contrast Kuno's term theme, 'what a sentence

is about', with the notion of topic, 'what is being talked about in a discourse'. We may speak of an element as being a topic if it is discussed in two or more adjacent or near-adjacent sentences in a discourse. I will speak of the potential introduction of a topic as the first mention of a NP referring to that topic. If the NP is followed by other mentions of it in following discourse, then it may become an established topic. Elements will not be topics simply by being anaphoric. Elements may become established topics only if they occur in two or more near-adjacent sentences. I will give examples of what is and is not a topic presently.

A discourse then will contain many topics, which are presumably related to each other and to the discourse topic or topics, i.e., those elements or concepts that the discourse is about. Consider now the following passage (28) (Ferguson and Brunn 1969:96):⁵

(28) a. St. Benedict

...

- b. The fame of his (St. Benedict's) holiness attracted numbers of monks to his vicinity, who begged him to be their leader.
- c. About the year 520 he founded the famous monastery of Monte Cassino, and some time later wrote for the guidance of his monks the rule which was to regulate monastic life for centuries.
- d. Wherever the rule was adopted, it checked the restless wandering and the dangerously irregular asceticism of the monks.
- e. It provided that the monk, after a probationary period of a year...should take the three fundamental vows of perpetual poverty, chastity, and obedience;

Here, 'St. Benedict' is the discourse topic. In (28b) the NP 'monks' is mentioned and mentioned again in (28c), (28d) and (28e). 'Monks' is clearly being talked about in this discourse. It is a topic. Also, 'the rule written by St. Benedict' is a topic, first mentioned and potentially introduced in (28c) and again mentioned in (28d) and (28e).

Now, given that we have these topics, which, by definition, must continue in order to be called topics, sentence (28d) is in conflict with Kuno's Hypothesis III. In (28d) we appear to have a continued topic, 'St. Benedict's rule', yet the form of (28d), forward pronominalization, would under Kuno's criteria indicate that new information is being introduced in (28d). What then of the mention of 'the rule' in (28c)? Kuno speaks of predictable themes as appearing when topics are continued. But he gives no characterization of how a topic comes to be, of how a topic is established.

I have characterized the first mention of an NP as the potential introduction of a topic. However, for an NP to qualify as an established topic, it must be, I claim, in some sense adequately defined and described. This phrase, 'in some sense adequately defined and described', is meant to characterize a property of a phrase within a

discourse. I will use the term topicality to refer to this property and also to a similar but distinct property of semantic or communicative relevance or importance that a sentence element may possess in a discourse. Topicality then refers to the likelihood of an element to continue as a topic in following discourse. Note that this is not the same concept as Kuno's predictable theme, for I am not concerned here with what a sentence may be about, but rather with what element or elements are likely to continue to be discussed, whether or not they occur as the distinguishable theme of the following sentence (if such a term can be adequately defined). It is then this property of topicality or definition and relevance of an element which allows the use of a backward pronominalized sentence (and also intersentential pronominalization--see section 4.1.3 below.)

Note here that I have ascribed two properties of a sentence element in discourse to the term topicality. In the case of sentence (7c), I claim that a reader may not know enough about 'the rule' from (28c) in order to accept it in a backward pronominalized sentence. If the rule which St. Benedict wrote had had a name, such as 'The Monk's Rule', and if the reader could have been expected to have previously known something about it, then we might well have gotten a sequence like (29):

- (29) ...and sometime later wrote for the guidance of
his monks The Monk's Rule. Wherever it was
adopted this rule checked...

This example parallels Kuno's data much more closely. Note that Kuno has used proper names in his discussion of predictable themes. Proper names and generics immediately define and describe their denotata to a reader. In (29), 'The Monk's Rule' is such a proper term. In (28c), however, 'the rule...' is not.

The other aspect of topicality, that of semantic or communicative relevance, is also a determining factor as to whether a sentence element can be used in a backward pronominalized sentence. Semantic or communicative relevance is dependent on the syntactic and semantic frame in which an element is potentially introduced, and also whether the element is being reintroduced (see section 4.1.3 for some concrete examples of syntactic and semantic frames).

Returning to (28), I have found some speakers who would accept a backward pronominalized sentence in place of (28d), i.e., (28d'):

- (28) d'. Wherever it was adopted, the rule checked the
restless wandering and dangerously irregular
asceticism of the monks.

I can offer two explanations for these speakers' acceptance of (28d'). The first explanation is that these readers find that (28c) has adequately characterized the NP 'the rule' so that it is considered a likely topic of following discourse. We have already seen that there is no syntactic constraint against backward pronominalization, as evidenced by the identical structure of (28c) and the first sentence of (29). It is simply a difference of opinion as to whether the

potential introduction of the topic in (28c) is a real establishment of the topic, i.e., whether (28c) has made the NP 'the rule' topical or not. And this difference of opinion is exactly what we would expect for non-generic, non-proper NPs potentially introduced in the syntactic frame of (28c). Readers who accept either (28d) or (28d') would, I claim, simply not be able to make a clear decision on whether the topic has been adequately established, whether (28c) has given 'the rule' a high enough degree of topicality. It is also possible that (28d') is acceptable because the reader considers it the first sentence of a new semantic or discourse paragraph. In this case, the remarks in section 4.1.2 below apply.

In sum, I want to say that Kuno's hypotheses concerning the conditions under which backward pronominalization may take place are correct as regards information distribution, but that they follow from a higher level consideration, i.e., that of previous establishment of the topic of a sentence element in discourse. Establishment of a topic means that the element is topical, it is a likely topic of the following sentence. Thus, the use of a backward pronominalized sentence may be a signal by the speaker/writer of his belief in the topicality of a sentence element.

This talk about speaker's or writer's use of a construction is strikingly reminiscent of Grice's (1975) maxims of conversation.⁷ In particular, I would propose that the felicitous use of a backward pronominalized sentence is correlated with Grice's maxim of relation: Be relevant. Felicitous use of a backward pronominalized sentence hinges on the topicality of the NP, or in other words, the relevance of the NP to the discourse. Thus, if (28d') had been used by the authors, they would have conveyed that they considered 'the rule' as adequately established or topical by (28c). The details of how to felicitously establish a new topic are surely quite complex and cannot be taken up here in full, but some aspects of establishment of new topics will be taken up in section 4.2 below. It is clear, however, that some notion of topicality must be a part of linguistic theory to account for the use of backward pronominalized sentences.

4.1.2. Topic Set

There appears to be one very common counterexample to Kuno's requirement that backward pronominalization take place only when the theme is predictable. This occurs in sentences that are discourse- or paragraph-initial or near discourse- or paragraph-initial. Consider (30) (Ferguson and Brunn 1969:177):

(30) Hildebrand's reform program

- a. After the death of Henry III, a succession of reforming popes carried on the work, but no longer in cooperation with the emperor.
- b. During all this time, till he himself was elected pope as Gregory VII, the monk Hildebrand was the most active agent of reform at Rome, the power behind the papal throne.
- c. It was he who formulated most perfectly the program for reform and finally put it into effect.

Sentence (30b) is the counterexample to Kuno's Hypothesis II. Backward pronominalization here serves, I claim, to set a topic. 'Hildebrand' is, in fact, what the entire paragraph that follows (30b) is about.

Consider now (31) (Ferguson and Brunn 1969:69):

- (31) a. When Augustus ushered in the two centuries of Roman peace, he introduced also an era of unprecedented prosperity to Italy and the provinces.
b. The wars which had devastated the empire were ended.

(31a) is paragraph-initial. There is no mention of Augustus in this paragraph after (31a). I claim that if (31a) had been backward pronominalized, we would have expected more mention of Augustus.

Let us now return to Kuno's descriptive discourse example in (32):

- (32) Tom is a rather cold person. He avoids me when I need him.
a. ?On the other hand, whenever I want to talk to her, Mary comes to see me willingly.
b. On the other hand, whenever I want to talk to Mary, she comes to see me willingly.

(32a) is supposed to be inappropriate because 'Mary' is not a continuous topic under Kuno's definition. However, in (30b), 'Hildebrand' is also not a continuous topic. I believe that the difference between these examples for speakers who do question (32a) has to do with position within the discourse. While (30a) does relate to previous discourse, it serves as a setting or transition sentence for what a composition teacher might term the topic sentence of the paragraph, i.e. (30b). (32a), as Kuno has it, occurs further away from the beginning of its discourse paragraph.

However, (32a) would not necessarily have to occur within the same paragraph. We could easily imagine an entire paragraph about Tom, ending with (33):

- (33) But all in all, Tom is a rather cold person. He avoids me when I need him.

The next paragraph could, I claim, then begin with (32a), quite parallel to (30b) above. Here we would expect the discourse following (32a) to have 'Mary' as topic. Again we get a setting of a topic by paragraph-initial backward pronominalization.

I think we now have a good explanation for why (32a) in the context (32) is acceptable to many readers. It may be taken by the reader as a setting of a new topic. Since Kuno does not provide a following discourse context, the reader may, on encountering (32a), take it to be a setting for continued discussion of Mary. If Mary is never again mentioned after (32a), then (32a) would sound very odd, as in (32'):

- (32') ??Tom is a rather cold person. He avoids me when I need him. On the other hand, whenever I want to talk to her, Mary comes to see me willingly. But Tom's not like that. He shuns all contact with people. He...

Similarly, I think that (28d') of the previous section may be put into a semantic or discourse paragraph-initial frame by some readers. It would thus be considered as a topic-setting statement.

Even more typical of the counterexamples to Kuno's hypothesis are strictly discourse-initial sentences, in which there is no possible topic shift. Examples of this type are frequently found in newspaper editorials, e.g., (34) (St. Louis Post Dispatch 11/6/74):

- (34) **Headline: Self-Interest and Generosity**
- a. A week before he goes to Rome at the head of the United States delegation to the World Food Congress, Secretary of Agriculture Earl Butz continues to defend a position at odds with the needs of poor people and with the interests of our own country.
 - b. That his opposition to the establishment of government held food reserves does not reflect the prevailing American sentiment becomes more apparent as the time for decision approaches.

The rest of the article goes on to talk about Butz and the food conference. Here, the sentence is truly used to set the topic of the editorial.

I began this section stating that sentences like (30b) and (34a) were counterexamples to Kuno's hypothesis that backward pronominalization required a continuous topic. However, the notion of continuous topic, I believe, is still involved in the use of these sentences. I claim that for backward pronominalized sentences to be used appropriately in discourse initial position, the NP that is pronominalized must be continued as a topic further in the discourse. That is, (30b) would be inappropriate if 'Hildebrand' were not referred to further in the paragraph. Similarly, (34a) would be inappropriate if Earl Butz were not again mentioned. Hence, these sentences predict a continuing topic.⁸

It still might be asked why these sentences should signal that the backward pronominalized NP will be talked about in what follows. If we accept the conclusion drawn in the previous section that backward pronominalization under normal use signals that the NP has attained topicality and is hence part of what is involved in 'being relevant', then the use of a discourse initial backward pronominalized sentence might be considered a flouting of the maxim of relevance. The purpose of the flouting of the maxim here is precisely to implicate that the NP is to be taken as the topic or a topic of the discourse. The speaker/writer can expect the hearer/reader to be able to make this inference.

4.1.3. Intersentential Pronominalization

There is an interesting parallel between backward pronominalization intrasententially and simple pronominalization across sentence boundaries. Mere anaphoricity, as any composition teacher would be quick to point out, does not constitute a sufficient condition for pronominalization. There must of course be a contextually unambiguous antecedent NP for the pronominalization to be considered appropriate. However, even when a referent may be unambiguously determined, we may still find that pronominalization sounds odd. Consider (35) (Ferguson and Brunn 1969:54):

- (35) a. The devastating struggle with Carthage and the final victory, which made Rome the strongest power in the Mediterranean world, wrought great changes both in internal politics of the republic and in her relations with other states.
- b. The conflict between the democratic and aristocratic parties had been thrust into the background by the stress of war.
- c. The plebians had already gained sufficient voice in government to satisfy their most pressing demands and, while the state was in danger, were willing to entrust the conduct of affairs to the more experienced senatorial class, which now included many of the richer plebians who had gained admission to the Senate by way of public office.
- d. The Senate, indeed, had gained almost complete control of policy, especially in foreign affairs, for it was a continuing body, and its members were more thoroughly conversant with the complicated problems of state than the yearly magistrates or the occasional popular assembly could be.

Sentence (35d) must have the full NP 'Senate'. (35d'):

- (35) d'. *Indeed it had gained almost complete control...

with 'Senate' pronominalized would be completely unacceptable in context (35). My claim here is that NPs may not be pronominalized across sentence boundaries if they are not topical in the discourse. Note the position and the semantic function of the potential antecedent in (35c): the object of a preposition in a relative clause modifying the object of a relative clause. Semantically as well as syntactically, 'Senate' in (35c) is at best a qualifier of a qualifier. It could hardly become established as a topic from this position.

While 'Senate' in (35c) is quite deeply embedded and is clearly not a theme in (35c), note that a sentence element need not be a theme in Kuno's sense to be pronominalized, e.g. (36) (Ferguson and Brunn 1969:148):

- (36) a. The home of the Northmen was in the three
Scandinavian countries of Denmark, Norway
and Sweden.
b. There, cut off by the sea...they had retained
their pagan religion...

Note that the phrase 'the three Scandinavian countries of...' in (36a) is new information. In (36b), 'they' is surely the theme by Kuno's criteria, but nonetheless we find both 'Northmen' and 'Scandinavian countries' pronominalized. Both are topics, the 'Northmen' is the discourse topic here, and 'Scandinavian countries' apparently is adequately established in (36a).

While we have found that noun phrases must attain a high degree of topicality before they can be referred to by pronouns, it is also the case that a noun phrase may lose topicality. Intervening sentences that shift discourse subtopics and introduce new topical elements may well destroy the topicality of an NP. Thus consider the passage in (37) (Ferguson and Brunn 1969):

- (37) a. ...
b. So far as Hannibal's own part of this plan was concerned, his hopes were realized. In one battle after another he defeated the Romans, finally wiping out almost the entire Roman army at Cannae in 216 B.C.
c. But Rome's Italian allies failed to live up to his expectations.
d. They remained stubbornly loyal to Rome.
e. During the next few years the Roman army, under the leadership of Quintus Fabius, surnamed Cunctator (the Delayer), adopted the exasperating policy of refusing open battle, so that Hannibal was forced to waste his strength in futile maneuvers.
f. He could neither capture the city of Rome nor crush the elusive Roman army...

(37e) is the sentence of interest. 'Hannibal' is not pronominalizable within this context, for a shift in topic takes place in (37c) and (37d). 'Hannibal' becomes detopical. The so that-clause in (37e) reintroduces 'Hannibal' as topical, and thus pronominalization in (37f) is proper. Note again that the syntactic position of Hannibal in the so that-clause, i.e., subject position, plays a large role in the gaining or rather regaining of topicality. Had the so that-clause been (37e'), then (37f) would not be appropriate, since in the genitive, 'Hannibal' has not gained any topicality.

- (37) e'. ...so that Hannibal's army lost strength in
futile maneuvers.

In this section, I have not been concerned with sequences such as (38):

- (38) John_i and Bob_j came to town. *He_i needed a shave,
and he_j wanted to get a haircut.

which are inappropriate because the discourse referents can not be unambiguously determined. I feel this general restriction also follows from Gricean maxims, specifically the maxim 'Avoid obscurity of expression'. I believe that the restriction against pronominalization in (35d) and (37e) follows from the maxim of relevancy cited in the previous sections. Intersentential pronominalization is possible only when the NPs in question are topical, i.e. immediately relevant to the discourse. Pronominalization of any other NPs is in violation of this maxim.

4.1.4. Pronominal Topic Set

On the simple pronominal level, there is an interesting parallel to the flouting of the maxim of relation shown in section 4.1.2. Consider (39) (Crane 1930) which is (short) story-initial:

- (39) None of them knew the color of the sky. Their
eyes glanced level, and were fastened upon the
waves that swept toward them.

(39) contains the first two sentences of Stephen Crane's short story 'The Open Boat.' The topic of this short story is four men: the cook, the oiler, the correspondent, and the injured captain. These characters are the referent of the pronoun 'them' and 'their' in (39), and they are identified in succeeding paragraphs of the short story.

We must again assume that the referent of the pronominal 'them' and 'their' will continue to be talked about, for otherwise the author would be writing irrationally. As the case stands, the author has flouted the maxim of relation for stylistic effect, and thus set the topic of the discourse as the yet to be identified postcedents of the pronoun 'them'. This whole stylistic effect would be destroyed if the referents of the pronouns in (39) had never been identified and not been further talked about. Indeed, the discourse would have been judged inappropriate. Thus, discourse-initial pronominalization, just as discourse-initial backward pronominalization, signals that a topic has been set.

4.1.5. Summary

In these four sections on pronominalization, I have shown that we need a notion of topic or what is being talked about, in order to deal with the facts of intersentential and intrasentential pronominalization. We may speak of an element as being a topic if it is under discussion in at least two adjacent or near adjacent sentences of related discourse. While being discussed, a topic may become an established topic. An established topic has attained communicative importance or topicality. However, a topic may lose its topicality and have to be reestablished.

A discourse, then, is a sequence of sentences with semantic coherence, a relationship that obtains between topics and subtopics. Certain topics of a discourse may be pronominalized if they are of

current relevance or topical. I have further suggested that felicitous pronominalization intra- and intersententially is related to the Gricean maxim of relation. A flouting of this maxim accounts for our understanding of pronouns and of backward pronominalized sentences in discourse and paragraph-initial position.

4.2. Topic Shift

4.2.1. Preposing and Restrictions on Preposing

In discourse, topics are constantly changing, new topics are being introduced and old topics are reintroduced. With respect to this, the Praguian notion of the 'basic distribution' of information from old to new is often realized by certain English constructions.

Consider (40) (Ferguson and Brunn 1969:49):

- (40) a. The majority of the Italian people were evidently descended from tribes of mixed ethnic origin who had drifted down from the north across the Alps in successive waves during the second millenium before Christ.
- b. Of these the most important for Roman history were the kindred Latin peoples who settled the fertile plain of Latium on the western coast south of the Tiber...
- c. They were already well established when the neighboring district of Tuscany to the north of the Tiber was conquered by the Etruscans sometime prior to 800 B.C.
- d. The Etruscans were a seafaring people of mysterious origin.
- e. Their language, which is not Indo-European, still baffles scholars...
- f. With them came the first elements of the highly developed civilization of the eastern Mediterranean, including the political form of the city-state.
- g. Their industrial and artistic products...

This passage presents us with a number of interesting discourse phenomena and syntactic correlates. Sentence (40f) is an example of the preposing of a prep-NP constituent and subject-verb inversion. This preposing construction is one of a number of constructions which, I claim, can fill two communicative functions. Langacker (1974) proposes that fronting rules (rules that move some constituent C to clause initial position) make that constituent more prominent, i.e., such rules highlight the objective content of a sentence (that part of the sentence which excludes illocutionary force, tense, aspect, modality, topic, focus, emphasis, negation, indication of speaker attitude). Now, while it is true that such fronting rules may make objective content more prominent than, for example, speaker attitude, as in (41):

- (41) Lobster I hope my cat will eat.

I cannot see any such correlate in (40f). It is not the case that the prep-NP constituent is moved over any non-objective content. Rather, I want to say that such preposing can also be used to deemphasize the importance of certain sentence elements, allowing new topics to be introduced, here the subtopic of Etruscan civilization, which is potentially introduced in (40f), and continued in the appositive relative in (40f) and in sentence (40g).

Such preposing and inversion for topic shift is characteristic of a number of root transformation constructions (Emonds 1970), e.g., PP substitution as in (40f) and (42), directional adverb preposing as in (43), and participle preposing as in (44):

(42) In each hallway (hangs, has long stood) a large poster of Lenin.

(43) Down the street rooled the baby carriage.

(44) Speaking at today's luncheon will be our local congressman.

These are sentences that, according to Kuno (1972), present 'the whole event or state as new (299)'. But note that (40f) is 'grounded' in the old topic, 'the Etruscans'. I think it would be better to say that these constructions are used primarily to shift from one topic to another.

Note that inversion is not a necessary property of these topic shift sentences. Hooper and Thompson (1973) claim that the root-transformed sentences (42), (43), and (44) occur only in environments that are asserted. Thus, (42) and (43), according to them, are odd as complements of factive verbs:

(45) ??It is remarkable that in each hallway hangs a large poster of Lenin.

(46) ??It is too bad that down the street rooled the baby carriage.

Note that preposed, but non-inverted, sentences corresponding to (42) and (43), i.e., (47) and (48) respectively, do not seem to fit the factive contexts either:

(47) In each hallway a large poster of Lenin hangs.

(48) Down the street the baby carriage rolled.

(49) ??It is remarkable that in each hallway a large poster of Lenin hangs.

(50) ??It is too bad that down the street the baby carriage rolled.

All of these sentences may be used to shift the topic. The reason that they sound odd as complements of factive verbs is that we are trying to say something about an NP at the same time we are first introducing it. But if we are saying something about an NP, then it has already become a topic. Thus, there is a conflict.

Hence, I conclude that preposing in general may be used to get the old topic out of the way so that a new topic may begin to be introduced. This general consideration holds for most preposed

clauses with which I am familiar. Note the preposing of the purpose clause in (51) (Ferguson and Brunn 1969:85):

- (51) a. ...
 b. The unity of the church was a vital issue.
 c. To preserve that unity, one side of the argument or the other (Constantine did not care which) must be established as orthodox and those who would not accept it of their own free will must be forced to do so by the state.

While the conjunction in (51c) seems to block the purpose clause from occupying the end position of the sentence, note that the sequence in (51') is also quite bad.

- (51') b. The unity of the church was a vital issue.
 c. One side or the other must be established as orthodox (in order) to preserve that unity.
 d. ???Those who would not accept it of their own free will must be forced to do so by the state.

The purpose clause at the end of (51'c) effectively prevents 'one side or the other' from gaining enough topicality for pronominalization to take place in (51'd).

By way of contrast, consider sentence (40c). Here, the when-clause can not be preposed to (52) within the context of (40).

- (52) When the neighboring district of Tuscany to the north of the Tiber was conquered by the Etruscans sometime prior to 800 B.C., they were already well established.

The when-clause in (40c) contains new information, and serves to introduce the new topic 'the Etruscans'. The following sentences, (40d) and (40e) show that the topic 'Etruscans' has been continued. Note that had (40d) continued 'the Latins' as a topic, as in (53):

- (53) Thus we conclude that the Latins must have come to Italy well before 1000 B.C.

then either (52) or (40c) would have been appropriate, since topic shift would not take place.

4.2.2. A Constraint on the Position of Topical Elements

While it has been shown above that topical material often occurs sentence initially, I have not previously discussed any positions that do not allow the occurrence of topical elements. I want to claim here that the NP of the by-phrase of the passive cannot contain a topical element, and is further often used as the position in which potential topics are introduced. This statement predicts, then, that sequences such as (54) will not occur:

- (54) *Bill was touring Columbus. The whole city was seen by him in less than a day.

In contrast to (54), we do get by-phrases that introduce new topics, e.g. (55) (Ferguson and Brunn 1969:150):

- (55) a. Here (Wessex) they (the Danish) were finally checked by the skillful and courageous leadership of the young Alfred (871-900), who succeeded his elder brother as king of Wessex in the midst of the invasion.
 b. Seven years later 'the army', as the Saxons called the Danish host, again invaded Wessex and was again repulsed.
 c. Later Alfred reconquered London and part of Mercia from the Danes.

where 'Alfred' becomes the topic of this paragraph.

A similar constraint occurs interclausally. So, an example parallel to (54) above would be (56):

- (56) ???Though my friend Bill started touring Columbus early in the morning, the whole city wasn't seen by him in a day.

I have not found any sentences in which a NP which is topic of the sentence occurs in the by-phrase of the passive main clause which follows a subordinate clause of the schema:

$S(S(NP_i V...) ...V_{pass} \text{ by } NP_i)$

in any of my research.

Nor have I found any sentences in which a deleted element of a subordinate clause occurs as the NP of a by-phrase. Consider (57) (Ferguson and Brunn 1969:177):

- (57) Small and unprepossessing in appearance, he [Gregory] yet commanded respect by his integrity and burning zeal that threatened to consume his frail body.

Here, I think we would want to say that the first phrase 'small and unprepossessing in appearance' is a reduced although-clause, the evidence for this claim being the correlative yet in the main clause. When we do get sentences of this form, we seem to get by-phrases containing new information, e.g. (58) (Ferguson and Brunn 1969:142):

- (58) While returning through the Pyrenees, the rear guard of the Frankish army, led by a noble named Hroudland, was cut off and destroyed by Basque mountaineers in the pass of Roncesvalles.

Note that it is not necessary that topical elements appear in subject position. If this were the case, then there would not be a constraint barring topical information from appearing in by-phrases, but rather a restriction on where topical information must appear. In (59) (Ferguson and Brunn 1969:21) the topic 'Hittites' may be continued by a genitive:

- (59) a. Save for some cryptic references in the Old Testament and in Egyptian sources, the Hittites were virtually unknown to history until the early years of this century, when archaeological excavations brought to light the ruins of their cities and thousands of clay tablets_i...
- b. Through these_i, it has been possible to re-construct the outlines of their history.
- c. They were a warlike people...

Thus, topicality may continue outside of subject position. This may also be illustrated interclausally. Consider (60):

- (60) a. Nixon told his generals that they had one more chance.
- b. So they tried again in Vietnam.
- c. But \emptyset having failed there, Nixon summarily fired them.
- c'. But \emptyset having failed there, suicide was their only alternative.
- c". *But \emptyset having failed there, other lands were ravaged by them.

In (60c), the topical element is in object position. In (60c'), the topical element is a genitive. However, the topical element in the passive by-phrase in (60c") results in a bad sentence. Thus, I conclude that the passive by-phrase prohibits continued topics, and further, may be used to introduce elements which become topics.

4.2.3. Funny Clefts

The cleft sentence is often used to illustrate differences in old and new information, e.g., in the question-answer sequence in (61)

- (61) Q: Who hit Sue?
A: It was John who/that hit Sue.

The information in the that/who-clause is usually said to be 'presupposed', with new information appearing in the clefted position. We can see that trying to add new information (such as an appositive relative clause) to the presupposed proposition in the who/that-clause seems quite odd. (62) could not be an answer to (61):

- (62) ???It was John that hit Sue, who is a really beautiful girl.

I have found another type of cleft sentence in which the that-clause contains new information which may serve to allow a shift in topic. Consider (63) (from J. Susann--Once is Not Enough)

- (63) a. But the weekends January spent with her father in New York, she only saw a handsome man who lived to please her.
 b. It was because of these weekends that January discouraged all attempts at any "buddy-buddy" relationships with the girls at school.
 c. Having a buddy-buddy meant holiday dinners at their homes and occasional weekend "sleepovers" --on a reciprocal basis.
 d. And January had no intentions of sharing any of her weekends with her father.

In this example, the old information is found in the clefted position. The new information contained in the that-clause may indeed become topical, as evidenced by the pronoun their in (63c) referring to the 'girls at school' of (63b). And although (63d) returns to the main topic, 'January', it could have felicitously contained more information about 'the girls at school' as a subtopic.

5. Summary and a Prospectus for Further Investigation

5.1. Summary

I have shown here that a number of syntactic constructions and restrictions on syntactic constructions may be explained by viewing discourse as a communicative act in which a speaker may talk about different things, or, in my terms, a speaker may move from one topic to another. I have attempted to show that backward pronominalization and intersentential pronominalization depend crucially on the speaker's having established a topic. To be an established topic, a sentence element must gain a high degree of topicality within a discourse. Topicality is a property of an element in discourse, which refers to the adequate description of that element and to its communicative relevance to the discourse.

I have shown that Kuno's (1972) statement of the conditions on backward pronominalization is not well-grounded, since the basis of his argument rests on an undefined notion of the term topic. I have presented a definition of topic, i.e., 'what is being talked about', and have tried to demonstrate some ways in which topics may be introduced and shifted. The shifting of topics has been shown to correlate with specific sentence constructions.

What I hope has emerged from this thesis is that the notion topic(s) of a discourse must be made a part of linguistic theory in order to explain syntactic structure in context. And beyond that, an adequate definition of what linguistic mechanisms may be employed to establish a topic need to be defined, or we will be left with descriptive terms, such as Kuno's predictable theme. We need to investigate the communicative properties of sentences and sentence elements, i.e., what speakers or writers do with linguistic entities. I have suggested one such property, topicality.

5.2. Looking Ahead

I view this thesis as only a pilot study into the realm of the communicative properties of linguistic entities. I believe that an exhaustive treatment of these properties will lead to an explanation of why sentences in context are structured the way they are. I will suggest in this section several factors which I believe must be taken into account in such a study.

First, I believe that the genre of discourse will be a parameter. I have used the terms 'conversational discourse', 'question-answer discourse', 'expository descriptive discourse', 'argumentative discourse'. These terms need refinement and definition. Also, I think it is safe to say that part of the definition of 'type of discourse' will be a notion of discourse structure, i.e., the communicative function of the particular sentences within the discourse and their interrelationships.

Second, the role of shared information between speaker and hearer or writer and reader will need to be pinned down. I have tried to avoid this complication in this study, but much of what I have argued for here, especially which are the topical elements in a discourse, becomes harder to determine when two speakers share a great deal of knowledge. A transcribed conversation between intimates can be almost incomprehensible to an outsider. Validating a theory of communicative properties of sentences and sentence elements is much more difficult when much of a conversation is unspoken, yet implicitly communicated and understood.

Thirdly, some way of testing the reality of the proposed communicative properties is needed. Clark and Haviland (1975) have in fact proposed that speakers may employ a comprehension strategy based on the division of a discourse into new and old information. This strategy is presumably testable by psycholinguistic techniques.

Finally, when moving from the sentential level to the discourse level, a great deal of imagination on the part of the investigator is needed. Linguistic theory has seen many changes and will see many more. But this should not deter the investigator from taking a stand on an issue, for only by having a starting point can a theory be refined and advanced.

Footnotes

*This is a revision of my 1975 Ohio State M.A. Thesis. I owe a great deal of thanks to Robert Jeffers, who acted as my adviser for this thesis, whose encouragement spurred me on to finish it, and whose critical comments have helped me clarify my thoughts and my prose; and to Arnold Zwicky whose substantive and editorial comments have been of great help toward this revision; and to Olga Garnica, who also served on my thesis committee.

¹I cite Kuno's (1972) numbering after example sentences taken directly from his article.

²Sentences from Kuno are presented with Kuno's characterization of grammaticality (*, ?, etc.). The response to sentence(11) may well be

appropriate for some speakers. In general, Kuno has not provided nearly enough linguistic or extralinguistic context for his data to be well understood.

³Kuno notes that (17a) would be better with pronominalization in both clauses. This potential for both clauses to be pronominalized is a general source of problems in evaluating Kuno's data. I link the conditions on intersentential pronominalization with backward pronominalization in 4.1.3.

⁴I give some specific ways in which one might predict that an unpredictable theme might occur in section 2.2.1.

⁵For those speakers who find the response in (21) awkward, see my comment in section 3 on the seemingly implicit presumption by Kuno that questions can be asked before all sentences.

⁶Many of the examples used in this thesis are taken from Ferguson and Brunn (1969), A Survey of European Civilization, Vol. 1, a text used in a freshman course in Western Civilization. I have chosen this book because it is written entirely in what I have termed expository discourse. The book is highly structured and factually oriented. It contains a great variety of declarative sentence types and represents what I believe is informative descriptive discourse, i.e., the authors are not presenting any kind of critical analysis with the aim of convincing their reader of some point or points, as I try to do in this thesis. My selection of genre of this sort is not meant to imply that the arguments given herein are applicable only to informative expository discourse. I have selected this work because it does not presume prior knowledge of any of its content by the reader (other than, of course, a knowledge of the English language and the shared Weltanschauung of English speakers). Hence we will not have to deal as much with an author's implicit assumptions about his readership, as I do in writing this thesis. Argumentative descriptive discourse, in which this thesis is written, often requires that the speaker have prior knowledge of the subjects to be discussed. For this study, I choose not to take this additional factor into consideration, although it must be treated in an extension of my theory (see 5).

⁷Grice (1975) has argued that '...there are very many inferences and arguments, expressed in natural language and not in terms of formal devices, which are...recognizably valid.' He argues that there are general maxims governing rational conversation, and that a 'flouting' of any of these conversational maxims will give rise to a conversational implicature. That is, a speaker may violate a conversational maxim with the expectation that his hearer will be able to 'work out' the reason why the speaker has violated it. Grice gives an example of flouting the maxim of relation: 'Be relevant'. Suppose B, in response to A's inquiry about how a friend C is doing at a new job in a bank, should reply, 'Oh quite well, I think; he likes his colleagues and he hasn't been to prison yet'. In uttering that phrase, B has indeed violated a conversational maxim and '...A must regard (B's) irrelevance as only apparent if and only if (B) supposes (A) to think that C is potentially dishonest.' Hence, B has here implicated that C is dishonest.

⁸Kuno (1972) in the last footnote in his article does state that initial backward pronominalized sentences do occur. He does not give an explanation. Further, his example is:

- (a) In one of his campaign speeches, Nixon expressed his desire to reunite the country.

I have specifically avoided giving examples of backward pronominalization of genitives as in (a). I don't know quite how to characterize the problem, but perhaps some examples may show that these genitives are of a different nature than the examples given in this section. First, consider that a near paraphrase of (a) can be gotten without the genitive pronoun at all, e.g. (b):

- (b) In a campaign speech, Nixon expressed his desire to reunite the country.

A more telling example would be (c):

- (c) Tom is a rather cold person. He avoids me when I need him. On the other hand, whenever (her) time permits, Mary comes to see me willingly.

I find this sentence more acceptable than (32a) above. Again the genitive pronoun is not critical to the expression of the content of the sentence. Thus, I believe that it must be considered as less central to the issues at hand.

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